Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) An N-acetyl-L-cysteine cell culture medium (NAC medium) comprising;

a buffered, serum-free solution having a pH value from about 6.8 to about 7.6, said solution containing:

glucose;

a biologically utilizable form of pantothenic acid or choline;

at least one inorganic ion in a biologically utilizable form, wherein said ion is chloride ion, phosphate ion, calcium ion, magnesium ion, potassium ion, sodium ion, or iron ion;

cumene hydroperoxide, wherein said cumene hydroperoxide is present in a concentration of about 5 μM to about 500 μM ;

deionized water,

N-acetyl-L-cysteine (NAC);

a mitogen wherein said mitogen stimulates said lymphocytes to grow; and

optionally, at least one of a supplemental nutrient in a biological utilizable form wherein said supplemental nutrient is:

- a) an L-amino acid;
- b) a vitamin; or
- c) at least one of pyruvate, adenine or inositol.
- 2. (currently amended) The method cell culture medium of claim 1, wherein said L-amino acid is selected from the group consisting of L-arginine, L-cysteine, L-glutamine, glycine, L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, L-phenylalanine, L-serine, L-threonine, L-tryptophan, L-tyrosine, and L-valine.
- 3. (currently amended) The $\frac{\text{method}}{\text{cell culture medium}}$ of claim 1, wherein said vitamin is selected from the group consisting of biotin, folinic acid, nicotinamide, nicotinic acid, riboflavin, thiamin, vitamin B_6 , and vitamin B_{12} .
- 4. (currently amended) The method cell culture medium of claim 1, wherein at least one of said pyruvate, said adenine or said inositol supplements said cell culture medium at concentrations eliciting approximately a maximal growth response.

5. (new) An N-acetyl-L-cysteine cell culture medium (NAC medium) comprising:

a serum-free cell culture medium;

cumene hydroperoxide; and

N-acetyl-L-cysteine (NAC).

- 6. (new) The N-acetyl-L-cysteine cell culture medium of claim 5, wherein said cumene hydroperoxide is present in a concentration of about 5 μ M to about 500 μ M.
- 7. (new) The N-acetyl-L-cysteine cell culture medium of claim 5, further comprising glucose.
- 8. (new) The N-acetyl-L-cysteine cell culture medium of claim 7, further comprising a biologically utilizable form of pantothenic acid or choline.
- 9. (new) The N-acetyl-L-cysteine cell culture medium of claim 8, further comprising at least one inorganic ion in a biologically utilizable form, wherein said ion is chloride ion, phosphate ion, calcium ion, magnesium ion, potassium ion, sodium ion, or iron ion.
- 10. (new) The N-acetyl-L-cysteine cell culture medium of claim 9, further comprising deionized water.
- 11. (new) The N-acetyl-L-cysteine cell culture medium of claim 10, further comprising a mitogen wherein said mitogen stimulates lymphocytes to grow.
- 12. (new) The N-acetyl-L-cysteine cell culture medium of claim 11, further comprising at least one of a supplemental nutrient in a biological utilizable form wherein said supplemental nutrient is:
 - a) an L-amino acid;
 - b) a vitamin; or
 - c) at least one of pyruvate, adenine or inositol.
- 13. (new) The N-acetyl-L-cysteine cell culture medium of claim 12, wherein said cumene hydroperoxide is present in a concentration of about 5 μ M to about 500 μ M.
- 14. (new) The N-acetyl-L-cysteine cell culture medium of claim 12, wherein said L-amino acid is selected from the group consisting of L-arginine, L-cysteine, L-glutamine, glycine, L-histidine, L-isoleucine, L-leucine, L-lysine, L-methionine, L-phenylalanine, L-serine, L-threonine, L-tryptophan, L-tyrosine, and L-valine.
- 15. (new) The N-acetyl-L-cysteine cell culture medium of claim 12, wherein said vitamin is selected from the group consisting of biotin, folinic acid, nicotinamide, nicotinic acid, riboflavin, thiamin, vitamin B_6 , and vitamin B_{12} .

Application No. 10/696,334
Response to Office Action dated December 1, 2004

16. (new) The N-acetyl-L-cysteine cell culture medium of claim 12, wherein at least one of said pyruvate, said adenine or said inositol supplements said cell culture medium at concentrations eliciting approximately a maximal growth response.